

This listing of claims will replace the originally filed claims in the application.

Listing of Claims:

Claims 1- 17 (canceled)

Claim 18 (new): A process for arc welding, which comprises:

- (a) at least one metal workpiece (1);
- (b) a matrix (2) consisting of at least one brazed zone (3); and
- (c) a braze that contains copper and phosphorus,

wherein said process comprises the steps of:

- (i) depositing at least one layer (5, 6, 7) of an alloy containing copper and tin on at least part of the brazed zone (3); and
- (ii) welding the metal workpiece (1) to at least one copper/tin alloy layer (5, 6, 7).

Claim 19 (new): The process according to Claim 18, wherein said copper/tin alloy comprises at least about 1.0% tin by weight.

Claim 20 (new): The process according to Claim 19, wherein said copper/tin alloy comprises at least about 1.05% tin by weight.

Claim 21 (new): The process according to Claim 20, wherein said copper/tin alloy comprises at least about 1.2% tin by weight.

Claim 22 (new): The process according to Claim 21, wherein said copper/tin alloy comprises less than about 10% tin by weight.

Claim 23 (new): The process according to Claim 22, wherein said copper/tin alloy ranges from about 2% to about 8% tin by weight.

Claim 24 (new): The process according to Claim 23, wherein said copper/tin alloy ranges from about 3% to about 6% tin by weight.

Claim 25 (new): The process according to Claim 18, wherein said copper/tin alloy comprises at least about 80% copper by weight.

Claim 26 (new): The process according to Claim 25, wherein said copper/tin alloy comprises at least about 90% copper by weight.

Claim 27 (new): The process according to Claim 18, wherein said copper/tin alloy comprises less than about 1% phosphorus by weight.

Claim 28 (new): The process according to Claim 18, wherein several copper/tin alloy layers (5, 6, 7) are deposited.

Claim 29 (new): The process according to Claims 18, wherein deposition of said layers (5, 6, 7) comprise the steps of:

- (i) preheating the alloy zone;
- (ii) supplying and melting copper/tin alloy via an electric arc; and
- (iii) depositing said melted alloy in the preheated zone.

Claim 30 (new): The process according to Claim 29, wherein said preheating is carried out by using at least one electric arc.

Claim 31 (new): The process according to Claim 30, wherein said arc is generated by a TIG or a plasma welding torch.

Claim 32 (new): The process according to Claim 29, wherein said copper/tin alloy is supplied in the form of a wire.

Claim 33 (new): The process according to Claim 29, wherein said melting is generated by at least one MIG or TIG welding torch.

Claim 34 (new): The process according to Claim 18, wherein said phosphorus has a solubility limit that ranges from about 0.1% to about 3.5% by weight at the solidification temperature.

Claim 35 (new): The process according to Claim 18, wherein said matrix (2) comprises the steps of:

- (i) providing support via a stack of several plates (11);
- (ii) separating the plates by fins (12);
- (iii) forming spacers between the plates (11) ; and
- (iv) brazing the fins (12) to the plates (11),

wherein said matrix (2) and/or said workpiece (1) is a component of a fluid collecting and/or distributing container that forms part of a heat exchanger.

Claim 36 (new): The process according to Claim 35, wherein said workpiece (1) comprises copper or stainless steel.

Claim 37 (new): The process according to Claim 35, wherein manufacturing a brazed copper heat exchanger (10) comprises the steps of:

- (i) welding at least one fluid collecting and distributing container (1), to a stack of plates (11);
- (ii) forming spacers between the said plates (11) by the fins (12); and
- (iii) supporting at least one matrix (2).

Claim 38 (new): The process according to Claim 37, wherein said collecting and distributing container (1) comprises copper.

Claim 39 (new): A process for manufacturing a copper heat exchanger (10) comprising at least one collecting and distributing container (1) that comprises the steps of:

- (i) welding said container (1) at 4 to a brazed (3) matrix (2);
- (ii) supporting said matrix by a stack of several plates (11);
- (iii) separating said plates (11) by fins (12); and
- (iv) forming spacers between said plates (11).

Claim 40 (new): The process according to Claim 39, wherein said container (1) further comprises the steps of:

- (v) depositing at least one copper/tin alloy layer (5,6,7) on the matrix (2); and

(vi) welding said container (1) to at least one said layer (5, 6, 7).

Claim 41 (new): The process according to Claim 40, wherein said copper/tin alloy comprises at least about 1% tin by weight.

Claim 42 (new): The process according to Claim 39, wherein said fluid collecting and distributing container (1), welded at 4, comprises copper or stainless steel.

Claim 43 (new): The process according to Claim 39, wherein a plant for separating fluids, particularly gas mixtures, utilizes at least one heat exchanger (10).

Claim 44 (new): The process according to Claim 43, wherein said plant utilized is a cryogenic air separation unit.

Claim 45 (new): The process according to Claim 43, wherein said process separates air.

Claim 46 (new): The process according to Claim 40, wherein said copper/tin alloy comprises tin in an amount selected from the group consisting of:

- (a) at least about 1.0% tin by weight;
- (b) at least about 1.05% tin by weight;
- (c) at least about 1.2% tin by weight;
- (d) less than about 10% tin by weight;
- (e) about 2% to about 8% tin by weight; and
- (f) about 3% to about 6% tin by weight.